ENHANCING STUDENTS’ INDIVIDUAL ABILITIES THROUGH DIGITAL TECHNOLOGIES

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Summary. The article analyzes the role of information and communication technologies in providing motivation and increasing the effectiveness of improving critical thinking, as well as the formation of students’ communicative competence when learning foreign language. The necessary conditions and methods for the development of critical thinking, signs of a high level development of the above-specified individual characteristics along with the formed communicative competence are determined. It is substantiated that due to the processing of foreign language information from Internet sources and its use in communicative profession-oriented situations during the study of a foreign language, the influence of the motivational component of the educational process increases.

Key words: critical thinking; communicative competence; learning a professional foreign language; information and communication technologies; means of information and communication technologies of education, communicative language teaching.

The informatization of many spheres of society’s activity determines new tasks for the education system in terms of mastering and introducing information technologies into the educational process in order to prepare a person for full-fledged activity in the information society. The specified processes require a review of the purpose and content of education, corresponding changes in the structure of education, the formation of non-traditional approaches to the development of new educational forms and methods based on the technical re-equipment of the educational process.

Information and communication technologies (ICT) in the modern professional training serve as a means of intensifying the learning process in all disciplines. A high level of mastery of ICT forms a system of students’ abilities and skills that will allow them to work in a high-tech society: to be able to use a computer, information resources, modern software tools; use search engines and directories; purposefully find the necessary information; store and use the information found; process and submit information. In other words, the skills of organizing the search for information aimed at applying in one’s activities and interaction with the information obtained to solve specialized professional tasks should be developed in accordance with the knowledge acquired during the study of general professional and special disciplines.
As a result of mastering these skills the student elaborates higher level informational and intellectual capabilities. Therefore, scientists face the task of further studying the problems of effective use of ICT by students, in particular, information and search sites of both general and professional direction, social networks for the development of critical thinking and the simultaneous formation of communicative competence, necessary for the further development of a specialist.

The scientific problems of the introduction of ICT into the educational process were investigated in the works of many scientists. The American scientist John Dewey paid considerable attention to the development of critical thinking as the main strategy for the development of higher education. It was under the conditions of a problematic educational situation that he saw the formation and improvement of critical thinking as possible [1]. A researcher in the field of psychology D. Halpern [2] interprets critical thinking as a driving force aimed at achieving a certain goal. A mobile educational game is a means of developing critical thinking according to D. Parsons, Lee Hunyong, G. Kwon [3]. From the point of view of A. Saimer and M. Tymuchin [4], critical thinking is a higher-order thinking mechanism.

The American scientist R. Paul [5] perceives critical thinking as the basis of reforming education in the information society of the 21st century. From his point of view, one of the leading characteristics of a modern competitive specialist is critical thinking. The widespread use of ICT during the study of a foreign language provides unlimited access to information sources and provides various types of communication in the virtual environment of the Internet. It stipulated the formation and development of scientific research on the use of ICT while learning a foreign language (G. Stanley [6], N. Hockly [7], G. Dudeney [8], A. Walker, G. White [9]). Although researchers agree on the positive impact of ICT on various aspects of the educational process, they emphasize the need to create a favorable learning environment for the introduction of ICT.

The study of scientific works on the outlined problems resulted in the conclusion that the theoretical and methodological aspects of the use of ICT aimed at improving the individual characteristics of students, in particular, their critical thinking and communicative competence during educational activities, require further development in order to increase the efficiency of professional training in higher educational institutions.

The purpose of the article is to substantiate the expediency and reveal new forms and methods of using ICT for the purpose of forming critical thinking and communicative competence of students during the study of a foreign language.

In the modern society of information technologies, the task of studying the influence of IT technologies on the further development of their critical thinking and communicative competence in the educational activities of students remains relevant in the field of higher education. The advantage of ICT is that they: expand the field of communication with colleagues, specialists of the chosen professional field, through the Internet with the help of computer tools and various sources of information; diversify the forms of educational activity through participation in electronic seminars, conferences, symposia; provide the opportunity to update information from different regions of the globe regarding problems in the field of professional interests; grant access to electronic archives of software for professional computers.
During the educational process with the use of ICT, their potential is realized by actualizing critical and creative thinking as a factor in the professional development of the individual, gaining experience in online communication, increasing interest and tuning in to self-development, mastering the methods and techniques of systematic work for one’s own professional improvement, which is ensured through various forms of educational activities (execution of creative projects, participation in the work of virtual scientific laboratories, network business games, remote seminars and conferences). The effectiveness of these types of activities largely depends on the responsibility of students for the results of educational activities in situations when they can choose its forms and methods of educational activities and communication, various sources of information.

The skillful use of ICT in the educational process forms the students’ ability to work independently with sources of information, replenish their own intellectual and professional baggage with new knowledge, develop the qualities necessary for the high-quality performance of professional functions, consolidate their subject position, communication skills with a computer and the Internet. Future specialists in the educational process should develop the need to use ICT to solve certain educational tasks in order to improve their own critical and creative thinking. They should be aware that mastering the methods of applying these technologies in educational work significantly facilitates and increases the productivity of their professional activities.

ICT in educational activities become more effective if during educational work they are used as: a means of interaction with sources of information, which ensures optimization of mastering new knowledge and the formation of an individual learning style; the subject of study, i.e. mastering the methods of searching, processing and using information, realizing its specific features in creating an educational environment and stimulating opportunities for self-development and self-expression in the professional sphere; a tool for solving educational tasks that ensure the professional growth of future specialists in the informational educational environment.

ICT effectively contribute to the formation of critical and creative thinking skills of students, if their actions are aimed at the development of: information skills (perception, collection, selection, systematization, analysis, structuring, generalization of information); research skills (statement of the problem, formulation of the goal and specific tasks, definition of the object, subject, research hypothesis, development of the experiment program and its implementation, processing of results, formulation of conclusions); intellectual skills (systematization, generalization, analysis, synthesis, classification, comparison, comprehension, goal setting, reflection); creative skills (imagination, schematization, typification, emphasis, globalization, construction).

The result and method of solving educational tasks in learning a foreign language is achieved by relying on the information received by students independently from various sources (verbal and electronic) and using it in modeling communicative situations in the educational process.

The formation of students' critical and creative thinking skills by means of ICT involves students' acquisition of knowledge and skills of a verbal and non-verbal
nature in order to improve the quality of their professional training, search and processing of the necessary foreign language information from various sources.

The effectiveness of using ICT is ensured if they have a clear purpose, are based on various sources of information, include a set of different ways and techniques of searching, selecting, structuring and using information to solve educational tasks. Although the current understanding of critical thinking has greatly deepened, there remains a wide range of questions regarding such a complex concept for further research. It is essential to take into account other influential factors in the formation and development of critical thinking, namely, initial training of students, their beliefs, peculiarities of information perception, personal attitudes to certain processes and facts, methods of using IT technologies in the educational environment, as well as pedagogical features of their introduction into the educational process. To ensure the effectiveness of education and further professional activity, students need to develop the skills of comprehending educational information with a high degree of effectiveness. Perception, understanding, and use of knowledge require the construction of various educational strategies, metacognitive abilities, and incentives to use them. Critical thinking itself is a decisive factor that students need for successful learning and further professional growth [10]. Critical thinking fosters the activation of such mental processes as discrimination, analysis, evaluation [11] during perceiving information for its understanding and evaluation. Compared to the traditional form of education, the use of IT technologies for teaching and learning is based on other mechanisms.

The analysis of the modern development in the field of research shows that there are several definitions of critical thinking, which have the following characteristics: identifying and determining the causes of problems, using effective research methods, predicting one's own actions and the behavior of others, flexible use of argumentation, interpretation of the informational content, rational assessment of assumptions, facts and results of activity. According to another definition, critical thinking is an ordered intellectual process of active and effective conceptualization, applied use, analysis, synthesis, and/or evaluation of information accumulated or constructed through observation, accumulation of experience, reflection, justification, communication, with its use in further actions [12].

Much research on critical thinking has focused on the development of tools to objectively measure acquired skills, taking into account the difference in understanding of critical thinking among different scholars. Research is still ongoing and there is no consensus on the impact of the content of the educational material and the introduced IR technologies on the development of critical thinking. These tools for measuring the level of critical thinking are too complex and take a long time to implement. We will define critical thinking as a process of analysis, evaluation, decision-making, argumentation of the use of resources and one's own activity.

One of the leading goals of the modern learning process is to motivate students to take responsibility for learning outcomes by mastering tools and developing skills in a virtual learning environment. In this process, distance and virtual forms of learning require the development of more complex learning methods [13], [14]. It is generally known that computers provide a lower level of knowledge and skills, namely the memorization of facts, which can be assessed by
performing simple tasks with a choice between right and wrong answers, positive or negative answers, etc., compared to the construction of a more developed and complex system of cognitive skills. This requires posing more complex questions and tasks with ambiguous answers, which is more problematic for implementation in a virtual learning environment [15], [16], [17], [18]. Therefore, the value of an online course is mostly based on its structural components and their systematic construction.

It is clear that critical thinking is necessary to facilitate and improve the effectiveness of professional learning and personal development of students. The study of modern literature did not reveal a single opinion on the methods and forms of increasing the effectiveness of the development of critical thinking. There is a widespread opinion that in the virtual environment there are more significant obstacles to the development of critical thinking compared to the traditional form of education due to insufficient experience in the practical implementation of active learning methods, teamwork using electronic means. On the other hand, it is necessary to emphasize the advantages of online education for students due to the creation of conditions for individualization of education, elimination of time limitations of the educational process, defining one's own pace of learning information, conducting online discussions in convenient conditions of a virtual group or other community, etc.

Among the effective methods of developing critical thinking during student education, we include the following: posing important questions and problems with their unambiguous and clear formulation, selection and proper evaluation of information, construction of reasonable conclusions and their verification according to a system of certain criteria and standards, analysis of alternative points of view and ways of thinking, as well as taking into account other proposed ways of solving certain tasks. We can define comprehensibility, correctness, accuracy, relevance, significance, depth, comprehensiveness, logic, justice as signs of a high level critical thinking.

Special attention should be also paid to such digital services as a web-quest that is a form of the inquiries, using which students can obtain basic information from Internet sources, and a cyberguide, that is a specially organized unit based on standards and transmitted over the network. When learning foreign language Web-quests assist students in adapting to the opportunities and challenges of the virtual environment and subsequently developing their own network. As a result, students can exchange their own experience during collaborative activities with peers. At the same time cyberguides consist of certain instructions intended both for students and teachers, who work with special scientific literature. They also contain a description of the task, a step-by-step instruction for achieving the goal and the Internet resources necessary for obtaining the results and assessing them in the context of several relevant aspects.

In addition to material learning facilities, online/distance learning in the digital age, which includes videoconferencing software and massive open online courses, should be taken into account, since they allow eliminating geographic barriers and connecting learners all over the world. As a result, students' communicative abilities enhance. We acknowledge the crucial role of videoconferencing software (Adobe
Connect, Zoom, Skype etc.) for language teaching and learning. These virtual tools reinforce practical training, since students can collaboratively learn foreign languages with their peers thus developing their communicative capacity and overcoming drawbacks of traditional classrooms. So, the advantages of videoconferencing in terms of communication skills include high efficiency of teaching and learning due to the increased role of students in the education process, fast feedback, multiple access to electronic information, peer-to-peer learning etc. However, there are certain disadvantages of virtual classrooms which are emotionally “poorer” than conferences that involve live communication.

Lately the purpose of second and foreign language teaching has aimed at developing communicative competence. The concept of communicative competence appeared as an opposition to the previous approaches which concentrated on grammar. Hymes defined communicative competence as “that aspect of our competence that enables us to convey and interpret messages and to negotiate meanings interpersonally within specific contexts” [19]. According to him the communication process was not an individual process any longer. The role of all speakers, listeners, writers and readers in this process became considerably more active. All their work turned into cooperative one.

There were four different categories of competences proposed by Canale and Swain: grammatical, discursive, sociolinguistic and strategic competences. A more complex version of communicative competence by Brown (2001) summarizes the concepts presented by Canale and Swain and other linguists. Basically communicative competence consists of some combination of the following components: organizational competence (grammatical and discourse); psychomotor skills (pronunciation); pragmatic competence (functional and sociolinguistic); strategic competence [20].

Learning English takes place within the classroom in EFL settings. So, it is essential for English teachers to foster learners’ activities that allow them to thoroughly develop own communicative competence. The online instruments as WebQuests can provide that. The tools provide oral and written information from various sources that learners will have to interpret and foster discussion of meaning among learners by means of collaborative work.

The development of communicative competence when learning foreign language requires applying various approaches and methods that achieve this goal. Communicative Language Teaching (CLT) appears as one of the most important communicative approaches. Most linguists now consider CLT as an approach that aims to make communicative competence the goal of language teaching and design procedures for the teaching of the four language skills that acknowledge the interdependence of language and communication.

As for characteristics of CLT it should be noted that learning goals are concentrated on all of the components (functional, discourse, grammatical, sociolinguistic, and strategic) of communicative competence [20]. Moreover, “language techniques are designed to engage learners in the pragmatic, authentic, functional use of language for meaningful purposes”. The use of games, and problem-solving tasks are important because they have certain features in common with real communicative events among others [21].
The fluency and accuracy are interpreted by a number of scholars as complementary principles underlying communicative techniques. At times fluency may acquire more importance than accuracy with the purpose of meaningful engagement of learners in language use. Students in a communicative class ultimately have to use the language, productively and receptively, in unrehearsed contexts outside the classroom. So, the purpose of any language learner is to be able to use the language to communicate outside the classroom, then in-class activities should provide students with practice of real-life situations.

Some scholars claim that CLT promotes autonomous learning [20]. Due to CLT students can concentrate on their own learning process through comprehending their own styles of learning and development of the appropriate strategies for autonomous learning. The activities for all types of learners (visual, auditory, and kinesthetic) promote enhancing students' speaking, listening, reading and writing skills, consciously or unconsciously. This allows learners to find their own path in their learning process.

Therefore, students are encouraged to comprehend meaning through direct linguistic interaction with others. That's why, cooperative learning is highly appreciated in students' learning process. As a result, cooperative learning using ICT takes place in a learner-centered environment where everybody participates in their own and others' learning.

Conclusions. The analysis of scientific publications on the researched problem made it possible to establish that there are still a number of issues that require further theoretical and methodological development. The professional activity of future specialists in the information society requires a sufficient level of critical thinking and communicative competence of specialists to ensure their competitive activity. It is substantiated that educational activity using ICT positively contributes to the development of critical thinking, as well as the formation of students' communicative competence. The processing of foreign language information from various sources of the Internet environment and its use during the practice of various types of communicative situations during the study of a foreign language, taking into account the individual characteristics and needs of students, provides a motivational component of educational activities and the development of their critical thinking and communication skills. The presence of students' attitude to the implementation of information and communication technologies has a positive effect on the development of the above-mentioned individual characteristics of students due to the strengthening of its communicative and motivational component. As a result students increase their interest in researched information on the methodology and technology of improving critical thinking and communication skills in the process of learning a foreign language. A noticeable transformation can be traced in the cognitive activity of students, their desire to approach the solution of educational problems in a non-standard way.

References:


